

CLASSIFICATION OF THE OLD WORLD MEMBRACIDÆ

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The characters usually recognized to separate the Membracidæ from the other Homoptera are: Head nearly vertical; ocelli situate between the eyes; antennæ minute, inserted in front of and between the eyes; beak arising from the mentum; pronotum convex, frequently with elevated processes, and usually prolonged posteriorly; tarsi with three articles.

A character called the "episternal hook" has been mentioned which according to McAtee and Malloch was observed in all the membracids examined by them. They claim that it distinguishes the group from all others, and describe it as follows: "Mesopleurum with a process or lobe either at or near antero-lateral angle, or just below middle of anterior margin, or both, processes which overlap the propleurum, in many cases fitting into excavations along posterior margin of that sclerite." Should this character be present in all membracids, and not in other groups, it would definitely limit the species to be included in the family.

No attempt has been made since Stal published his valuable synopses to include the Old World membracidæ in a generic classification; and, as many new genera have been recognized since then, it seems timely to arrange them all in a system whereby students may locate the various species in their correct generic position.

Buckton has well said "Biology ranges over the wide world, but it is obvious that identification of an insect is necessary before its habits and functions can be discussed." To identify these strange forms keys are herein presented which were based upon the species in my own collection, and the works in my library. The corresponding literature to and including the year 1926 is recorded in Funkhouser's Catalog, and since that date in the various scientific publications.

The genera preceded by an * are African; those by a † are Eastern, and those by * † have species in both regions.

- 3(6). Sides of chest destitute of small teeth.
- 4(5). Scutellum abortive or absent; apical angles of mesonotum more or less produced in spines; pronotum sometimes tuberculate; base of exterior discoidal cell of corium stylate.....*Coccosterphini*
- 5(4). Scutellum complete; apical angles of mesonotum not produced.
- Gargarini*
- 6(3). Sides of chest armed with one or two teeth.....*Ebhuloidesini*
- 7(2). Pronotum cornute above each humeral.....*Centrotini*
- 8(1). Wings with four apical cells; tegmina with two or three discoidal and five (rarely four) apical cells, apical area exceptionally multicellular.
- 9(10). Pronotum more or less gibbous, unarmed, rarely a slight tubercle or short carina above each humeral; apex of scutellum emarginate; legs simple*Uroxiphini*
- 10(9). Pronotum cornute above each humeral or the disk elevated in a high erect process; tibiæ rarely dilated and flattened.
- 11(14). Sides of chest not armed with teeth.
- 12(13). Pronotum cornute above each humeral; posterior process more or less distant from or impinging upon the scutellum, broad or slender at base; scutellum variable in length, the apex acute or emarginate*Leptocentrini*
- 13(12). Disk of pronotum elevated in a high nearly erect process its summit bilobed, or with a spine each side; posterior process slender, usually distant from the body; scutellum longer than broad, its apex usually acute*Micreunini*
- 14(11). Sides of chest armed with one or two teeth.
- 15(16). Disk of pronotum elevated in a recurved, erect, forward inclined or porrect process, its summit bilobed, bispined, bituberculate, or compressed; posterior process impinging upon or more or less distant from the scutellum, with or without subapical dorsal node; legs simple or tibiæ moderately dilated.....*Hypsauchenini*
- 16(15). Pronotum cornute above each humeral, surface covered with short spinules, or spinous tubercles, or rugose and nodulate; posterior process impinging upon or slightly separated from the scutellum, usually binodose, sometimes nearly straight; tegmina with two or three discoidal cells; tibiæ and apical margin of head usually foliaceous*Centrocharesini*

Gargarini

KEY TO GENERA

- 1(10). Posterior process impinging upon scutellum.
- 2(5). Hind trochanters with small teeth on inner surface.
- 3(4). Humerals strongly produced in cornutiform processes; body about as broad as long; posterior process broad, triangular, depressed; pronotum rarely carinate above humerals.....†*Sipylus* Stal

- 4(3). Humerals not strongly produced; body much longer than broad; posterior process slightly concave.....†**Centrotoscelus** Funkhouser
- 5(2). Hind trochanters not dentate on inner surface.
- 6(7). Posterior process laminately convexly dilated, apex briefly acute.
†**Subrincator** Distant
- 7(6). Posterior process not laminately dilated.
- 8(9). Pronotum without short carina above each humeral.
*†**Gargara** Amyot and Serville
- 9(8). Pronotum with a short carina above each humeral.
†**Xanthosticta** Buckton, *Tiberianus* Distant
- 10(1). Posterior process more or less distant from the scutellum.
- 11(12). Base of posterior process slightly but distinctly separated from the scutellum, strongly sinuately waved; pronotum strongly gibbous and ridged, rarely with a short carina above each humeral†**Ebhul** Distant
- 12(11). Base of posterior process strongly arched above the scutellum; disk of pronotum gibbous.
- 13(16). Posterior process moderately sinuate, base thick, apical area slender, surface not spinose; tegmina much longer than abdomen.
- 14(15). Posterior process impinging upon margins of tegmina behind scutellum***Kombazana** Distant
- 15(14). Posterior process robustly recurved to apex of scutellum then slender and linear, upwardly and backwardly recurved; pronotum with two ridged foveate spots near base.....***Promitor** Distant
- 16(13). Posterior process distant from the scutellum, strongly sinuate or undulate.
- 17(18). Pronotum not spinose, posterior process strongly convexly elevated to behind the scutellum, then impinging upon inner margins of tegmina and straight, acuminate; tegmina long as the abdomen.
***Umfilianus** Distant
- 18(17). Pronotum rugose, covered with spinules; posterior process thick, strongly undulate, not narrowed towards apex which ends in a long spine; tegmina slightly longer than the abdomen.....***Hamma** Buckton

Ebhuloidesini

KEY TO GENERA

One genus belongs to this tribe which differs from the genus *Ebhul* Distant in having the sides of the chest armed with teeth. The type is *Ebhul notatus* Funkhouser, in Suppl. Ent. xv, p. 17, fig. 27. (1927), from Sumatra.....†**Ebhuloides** gen. nov.

Centrotini

KEY TO GENERA

- 1(12). Base of posterior process impinging upon the scutellum.
- 2(5). Posterior process laminate with or without a dorsal node; apical angle of tegmina acute.

- 3(4). Dorsal node of posterior process strongly convexly elevated; tips of suprahumeral more or less angulate.
 †**Antialcides** Distant, *Pantaleon* Distant
- 4(3). Dorsal node of posterior process obsolete or absent; suprahumeral short, auricular.....†**Machærotypus** Uhler, *Maurya* Distant
- 5(2). Posterior process not laminate.
- 6(11). Hind trochanters spinose within; suprahumeral distant between bases.
- 7(10). Veins to apical cells of tegmina straight; posterior process robust, acuminate, not elevated, base broad, apex not or just passing apex of clavus.
- 8(9). Tips of suprahumeral truncate.....†**Otaris** Buckton
- 9(8). Tips of suprahumeral acute.....†**Tricentrus** Stal, *Taliopa* Buckton
- 10(7). Veins to apical cells of the vitreous tegmina curved; posterior process rather slender, its apex elevated and far passing apex of clavus†**Tricentroides** Distant
- 11(6). Hind trochanters destitute of spines within; suprahumeral contiguous for a space from bases, then diverging and inclined more or less forward.....***Eumonocentrus** Schmidt, *Beninia* Distant
- 12(1). Base of posterior process more or less distant from the scutellum.
- 13(24). Posterior process distinctly angulate near base.
- 14(17). Suprahumeral contiguous or united for a space from bases or almost touching; posterior process broadly compressed, a short tooth at basal angle.
- 15(16). Bases of suprahumeral nearly contiguous, very long, subs slender, curved outward and backward, tips dilated; posterior process cylindrical on basal third, toothed at basal angle and convexly curved, compressed, long as or longer than tegmina, margins usually spinose; scutellum longer than broad, apex obtuse or notched***Paraxiphopæus** Goding
- 16(15). Bases of suprahumeral contiguous or united for a space then diverging, compressed, gradually acuminate; posterior process robust to basal angle then sinuate, compressed, shorter than tegmina, margins not spinose.
 ***Monocentrus** Melichar, *Basilides* Distant
- 17(14). Suprahumeral distant between bases; posterior process shorter than tegmina.
- 18(23). Suprahumeral directed obliquely outward and upward.
- 19(20). Posterior process compressed, nearly straight from basal angle, usually laterally carinate, inferior margin lobed at middle touching apex of scutellum.....†**Maguva** Melichar, *Anchonoides* Distant
- 20(19). Posterior process not lobed beneath; suprahumeral long, robust.
- 21(22). Posterior process nearly straight from basal angle, slender, distant from scutellum, basal angle sometimes toothed; tips of suprahumeral truncate†***Anchon** Buckton

- 22(21). Base of posterior process, including disk of pronotum, robustly and angulately elevated but not distant from scutellum then concavely sinuate, without a basal tooth; suprahumeral weakly oblique, tips acute***Spalirises** Distant
- 23(18). Suprahumeral horizontal, flat, rather long, acuminate; disk of pronotum robustly elevated posteriorly, angulate, then nearly straight, slender, acuminate, distant from the body, nearly long as tegmina***Planecornua** Goding
- 24(13). Posterior process more or less curved from base, not angulate.
- 25(25). Inferior margin of posterior process ampliate or lobed at middle, usually nearly straight, moderately robust; suprahumeral variable†***Centrotus** Fabricius, *Beaufortiana* Distant
- 26(25). Inferior margin of posterior process not ampliate or lobed beneath.
- 27(30). Posterior process curved at base, then straight to apex.
- 28(29). Tegmina with two discoidal cells, not longer than abdomen; suprahumeral short, slender, horizontal, acuminate; posterior process slender, convexly elevated high above scutellum, then oblique and straight to apex.
***Tricoceps** Buckton, *Tambusa* Distant, *Tambusana* Distant
- 29(28). Tegmina with four discoidal cells, some longer than abdomen; suprahumeral oblique, tips obtuse or truncate; posterior process broad at base, slightly arched above scutellum, then straight to the apex***Centrotusoides** Distant
- 30(27). Posterior process distinctly sinuate, not straight.
- 31(34). Posterior process moderately slender, strongly sinuate, acuminate at base.
- 32(33). Suprahumeral usually robust, strongly oblique.....†***Platybelus** Stal
- 33(32). Suprahumeral horizontal, slender, acuminate.....†***Evanchon** Goding
- 34(31). Posterior process heavy, not acuminate from base; suprahumeral very short, long as broad, thick, sides parallel, subhorizontal.
- 35(36). Posterior process with a large node at base, one at middle, and apical node ending in a spine even with but distant from tips of tegmina; suprahumeral serrate anteriorly, tips truncate emitting a spine; basal margin pronotum produced.....***Amitrochates** Distant
- 36(35). Posterior process not nodose, adjacent to tegmina behind clavus, apex abruptly attenuate, acute; surface spinose.
***Barsumas** Distant

Uroxiphini

KEY TO GENERA

- 1(8). Posterior process impinging upon the scutellum and margins of tegmina. (One species in *Pogontypus* it is slightly elevated).
- 2(7). Veins to apical cells of tegmina straight. (Rarely veins to the third and fourth apical cells irregularly slightly curved.)
- 3(6). Posterior process slender, gradually acuminate from base.

- 4(5). Base of posterior process much narrower than scutellum, apex slightly passing apex of clavus; pronotum convex, not gibbous, dorsum straight to apex; tegmina with two discoidal cells.
***Uroxiphus** Amyot and Serville
- 5(4). Base of posterior process a little narrower than scutellum, abruptly depressed and lightly sinuate, apical area strongly decurved almost to tips of tegmina; pronotum gibbous; tegmina usually with three discoidal cells.....†**Dingkana** Goding
- 6(3). Posterior process thick and broad on basal half, sides parallel, slightly amplified beneath, apical half abruptly slender, straight to apex of fifth apical cell of tegmina the latter with two discoidal cells†**Narnia** Walker, *Terentius* Stal
- 7(2). Veins to apical cells of tegmina strongly curved inwardly; pronotum convex, usually a short carina above each humeral, dorsum straight to apex; posterior process slender from base, much narrower than scutellum, tip just passing apex of clavus.
†**Pogontypus** Distant
- 8(1). Posterior process more or less distant from scutellum, slender.
- 9(14). Posterior process emitted from hind margin of pronotum, moderately sinuate, not strongly elevated above the scutellum.
- 10(13). Base of head destitute of tubercles; pronotum not gibbous; posterior process sometimes tricarinate.
- 11(12). Apical half of posterior process strongly curved upward equal to but distant from apex to clavus.....†**Occator** Distant
- 12(11). Apical third of posterior process straight, impinging upon margins of tegmina, tip slightly elevated just passing apex of clavus.
†***Melicharella** Goding, *Macherotypus* Melichar
- 13(10). Base of head with two prominent tubercles; pronotum convexly gibbous; posterior process moderately slender at base, slightly separated from scutellum, gradually acuminate, dorsum slightly sinuate, apical area straight tip far passing apex of clavus.
***Awania** Distant
- 14(9). Posterior process slender, tricarinate, emitted from high above hind margin of pronotum very distant from scutellum, straight, tip touching margins of tegmina far beyond apex of clavus; pronotum elevated, not gibbous†**Demanga** Distant

Leptocentrini

KEY TO GENERA

- 1(22). Base of posterior process distant from, rarely touching apex of scutellum.
- 2(7). Basal area of posterior process nearly erect, then abruptly angulate and extended posteriorly.
- 3(4). Posterior process broadly compressed and convexly curved behind basal angle, apex briefly acute; suprahumeral long, broad, oblique, apical area curved outwardly, tips truncate.

***Xiphopæus** Stal, *Kleidon* Buckton

- 4(3). Posterior process straight and gradually acuminate beyond basal angle, tip acute.
- 5(6). Suprahumerals horizontal, triquetrous, medium; posterior process very robust on basal area, slender horizontal and acuminate beyond basal angle, often spinose on inferior margin; scutellum long as broad, apex emarginate.
- ***Euxiphopæus** Goding, *Xiphopæus* Stal, part
- 6(5). Suprahumerals strongly oblique, very long, slender, apical area curved, acute; posterior process slender from base, inferior margin not spinose; scutellum much longer than broad, apex acute.
- †**Maarbarus**
- 7(2). Posterior process slender, curved or straight from base, not angulate near base.
- 8(13). Veins to apical cells of tegmina strongly curved inwardly.
- 9(10). Suprahumerals porrect, subparallel, apical area angulately extended outwardly; posterior process slightly arcuate from base; scutellum longer than broad, apex acute.....†**Bathoutha**
- 10(9). Suprahumerals transversely horizontal or oblique, not porrect.
- 11(12). Scutellum long as broad, apex emarginate; posterior process sinuate its middle touching apex of scutellum, apical half impinging upon margins of tegmina; suprahumeral short, oblique, tips truncate†**Indicopleustes**
- 12(11). Scutellum much longer than broad, apex acute; posterior process straight from basal curve not touching margin of tegmina; suprahumeral horizontal, medium, slender, acute.....†**Parapogon** Distant
- 13(8). Veins to apical cells of tegmina straight.
- 14(21). Inferior margin of posterior process not lobed at middle, slender.
- 15(20). Scutellum about as long as broad, apex emarginate.
- 16(19). Disk or pronotum convexly elevated; suprahumeral transversely oblique, tips acute, not directed forwardly.
- 17(18). Posterior process convexly curved (straight in one species), extended far beyond apex of clavus.
- *†**Leptocentrus** Stal, *Rabduchus* Buckton, *Bocchar* Jacobi, part
- 18(17). Posterior process straight from base, obliquely elevated posteriorly and distant from margins of tegmina, apex not passing apex of clavus; suprahumeral short.....†**Nilautama** Distant
- 19(16). Disk of pronotum not elevated; suprahumeral directed forwardly, subparallel, not distant, tips broadened and truncate; posterior process slender, tricarinate, long as tegmina.....†**Arimanes** Distant
- 20(15). Scutellum much longer than broad, apex acute; disk of pronotum not or slightly elevated, suprahumeral variable.....†**Telingana** Distant
- 21(14). Inferior margin of robust posterior process bearing a lobe or swelling touching apex of scutellum; suprahumeral nearly horizontal; tegmina with two or three discoidal cells.
- †**Acanthophyes** Stal, *Lobocentrus* Stal, *Dograna* Distant

- 22(1). Base of posterior process touching or slightly separated from the scutellum, not distant from it.
- 23(24). Posterior process slightly but distinctly separated from the scutellum, shorter than tegmina.
- 24(29). Suprahumeral horizontal or subhorizontal.
- 25(28). Veins to apical cells of tegmina nearly straight, sometimes moderately oblique.
- 26(27). Posterior process broadly compressed beyond apex of scutellum, then laterally globose, apical area abruptly narrowed and depressed on margins of tegmina; suprahumeral slender, acute.
†*Aspasiana* Distant
- 27(26). Posterior process moderately narrow, undulate; sides straight, apical area impinging upon margins of tegmina; suprahumeral medium; tegmina slightly longer than abdomen.....**Tshaka* Distant
- 28(25). Veins to apical cells of tegmina curved inwardly; suprahumeral very short, acute, posterior process slender.....†*Polonius* Distant
- 30(33). Posterior process strongly undulate or sinuate, suprahumeral short; pronotum gibbous.
- 31(32). Front of pronotum moderately crescentiform and continuous with acute suprahumeral; posterior process medium, undulate.
**Dacaratha* Distant
- 32(31). Front of pronotum not crescentiform; posterior process sinuate, tips of suprahumeral obtuse.....†*Imporcitor* Distant
- 33(30). Posterior process slender, slightly sinuate; pronotum not gibbous, suprahumeral acute, rarely inclined forward.....*†*Otinotus* Buckton
- 34(23). Posterior process impinging upon and sometimes nearly covering the scutellum.
- 35(44). Suprahumeral inclined forward, with numerous carinae, or reticulate.
- 36(41). Suprahumeral strongly oblique or suberect, posterior process straight, apical area decurved.
- 37(40). Posterior process at least as long as the tegmina.
- 38(39). Suprahumeral long, robust, compressed, tips truncate or bidentate; apical half of posterior process strongly decurved, tip obtuse; tegmina usually with three discoidal cells.
†*Eufrenchia* Goding, *Ibiceps* Buckton
- 39(38). Suprahumeral medium, triquetrous, gradually narrowed, tips obliquely truncate and subacute; apical area of posterior process lightly decurved, subacute; tegmina with two discoidal cells.
†*Cebes* Distant
- 40(37). Posterior process straight, much shorter than tegmina, suprahumeral long, compressed, reticulate, apical area dilated, tips rounded the inner angles contiguous or approaching, the outer angle a short spine; tegmina with two discoidal cells.
†*Lubra* Goding

- 41(36). Suprahumerals porrect, broad, compressed, slightly diverging, tricarinate the posterior carina continued on posterior process to tip, bases distant, tips obtuse; posterior process straight, at least as long as tegmina, tip elevated.....†**Sarantus** Stal
- 42(35). Suprahumerals transversely oblique or horizontal, not inclined forward. They are inclined forward in one species each in *Sextius* and *Acanthuchus* and two in *Otinotus*.
- 43(46). Posterior process as long or longer than tegmina, rarely very slightly shorter, moderately sinuate. It is as long as tegmina in two species each in *Sextius* and *Acanthuchus*. Suprahumerals more or less oblique, rarely subhorizontal, tips acute.
- 44(45). Pronotum very strongly rugose, irregularly carinate, outer carina of suprahumeral continuous with lateral carina of the moderately slender posterior process.....†**Godingella** Distant
- 45(44). Pronotum not rugose or irregularly carinate; posterior process robust at base, gradually acuminate, apical area convexly curved, slender, short carina each side of base sometimes continued posteriorly:
 a. Corium with five apical cells.....†**Otinotoides** Distant
 aa. Corium with three apical cells.....†**Gondopharnes** Distant
- 46(43). Posterior process distinctly shorter than the tegmina.
- 47(50). Suprahumerals long, broad, erect or suberect.
- 48(49). Suprahumerals erect, laminate, tips broadly rounded hind angle acute, posterior process broad, acuminate, tip subacute.
 †**Elegius** Distant
- 49(48). Suprahumerals suberect, some diverging, triquetrous at base, compressed upwardly antero-posteriorly, twisted, tips distinctly broadened, truncate; posterior process heavy, acuminate tip decurved.
 †**Ceraon** Buckton, *Daunus* Stal, *Zanophara* Kirkaldy
- 50(47). Suprahumerals horizontal or broadly oblique.
- 51(58). Suprahumerals horizontal or subhorizontal.
- 52(55). Pronotum more or less gibbous before base of posterior process, suprahumeral very short, acute.
- 53(54). Pronotum strongly gibbous before base of posterior process, suprahumeral in a continuous line with the crescentic anterior area, seen from the front convex laterally; suprahumeral robust, recurved, subacute, posterior process, robust, nearly straight, beyond base†**Emphasis** Buckton
- 54(53). Pronotum moderately gibbous before base of posterior process, not crescentiform anteriorly; suprahumeral slender, straight, acute; posterior process slender, sinuate, tip decurved.....†**Crito** Distant
- 55(52). Pronotum not gibbous before base of posterior process, dorsum of posterior process about even with disk or pronotum.
- 56(57). Median carina of pronotum elevated just beyond base of suprahumeral in a spine or angle, or briefly foliaceous, rarely a second

- elevation near middle of posterior process; sometimes one or two veins to apical cells slightly sinuate.....†**Acanthuchus** Stal
- 57(56). Dorsum of pronotum nearly level from apex of metopidium to apex of posterior process, not dentate or foliaceous, the latter slightly amplified near base, nearly straight, tip acute.
†**Sertorius** Stal
- 58(51). Suprahumeral more or less strongly oblique.
- 59(68). Veins to apical cells of corium straight, rarely one or two veins slightly sinuate.
- 60(67). Dorsum nearly straight, not gibbous anteriorly.
- 61(66). Suprahumeral robust, weakly oblique, slightly elevated.
- 62(65). Apical area of corium normal, not reticulate.
- 63(64). Distance between bases of suprahumeral equal to width of head; suprahumeral triquetrous, tips subacute, dorsum of posterior process slightly areuate; apical cells of corium moderately short and broad*†**Centruchus** Stal, *Leucothorax* Buckton
- 64(63). Distance between bases of suprahumeral shorter than width of head; suprahumeral compressed, upper surface multicarinate, tips roundly truncate rarely acute; dorsum of posterior process usually straight; apical cells of corium elongate.....†**Eufairmairia** Distant
- 65(62). Apical area of corium strongly reticulate with numerous venules; tips of suprahumeral subacute.
†**Sextius** Stal, *Pterosticta* Buckton
- 66(62). Suprahumeral slender, distinctly oblique, longer than space between bases, acute; posterior process slender; dorsum level.
†**Periama** Distant
- 67(60). Pronotum more or less gibbous; posterior process robust, shorter than tegmina, suprahumeral broad, curved upwardly, tips acute.
†**Centrotypus** Stal, *Ibiceps* Distant, *Lestarches* Distant
- 68(59). Veins to apical cells of corium strongly curved inwardly, first apical cell very long; suprahumeral not longer than intervening space sometimes much shorter and weakly oblique, tips acute, recurved; posterior process slender, shorter than tegmina, slightly elevated at base in one species.....†**Pogon** Buckton

Micruini

KEY TO GENERA

- 1(4). Posterior process emitted from near the hind margin of pronotum but slightly separated from the scutellum; summit of the front process with a slender spine each side; apex of clavus obtuse.
- 2(3). Front process slightly inclined forward, slender, the summit not expanded; lateral spines of summit long, slender, recurved, tricarinate; posterior process slender, lightly arched to middle of abdomen†**Micruene** Walker

- 3(2). Front process erect its summit broadly dilated laterally, lateral spines short, bigibbous behind; posterior process sinuate, about as long as but not touching margins of tegmina.

†**Eutryonia** Goding, *Gelastorrhachis* Kilkaldy

- 4(1). Posterior process long, linear, straight or slightly convex, emitted from hind margin of front process at or below the summit, distant from the scutellum, apex approaching margins of tegmina; summit of front process emitting a long slender branch each side; apex of clavus obtuse.

- 5(6). Lateral branches at summit of front process moderately long, linear, recurved; posterior process just passing clavus.

†**Leptobelus** Stal

- 6(5). Lateral branches at summit of front process long, not linear, slightly recurved the apical half downward, emitting from its middle a strong spine projecting forward; posterior process nearly as long as tegmina.....†**Elaphiceps** Buckton

Hypsauchenini

KEY TO GENERA

- 1(12). Posterior process impinging upon the scutellum and inner margins of tegmina the latter usually with three discoidal and five apical cells, the apex of clavus acute.

- 2(9). Dorsal margin of posterior process with a subapical node; legs simple.

- 3(4). Apex of head trilobed; front process strongly and lengthily recurved, anterior lateral carinae not extended below to base, its summit bilobed not extended beyond apex of posterior process.

†**Hypsauchenia** Germar

- 4(3). Apex of head spatulate.

- 5(8). Front process strongly lengthily recurved its summit bilobed; venation of tegmina normal or nearly so.

- 6(7). Apical margin of tegmina obliquely truncate, apical angle acute; anterior lateral carinae of front process extended to base its summit not extended beyond apex of posterior process; head with a central keel; size smaller.

†**Pyrgauchenia** Breddin, *Pyrgophyllum* Breddin, *Pyrgolyrium* Breddin, *Hypsophyllum* Schmidt

- 7(6). Apical margin of tegmina obtusely rounded; anterior lateral carinae abbreviated before base its summit extended half its length beyond apex of posterior process; head not keeled, a deep sulcus near base; size large.....†**Gigantorhabdus** Schmidt

- 8(5). Front process straight, nearly erect, lightly inclined forward, broad, compressed, anterior lateral carinae not extended below its base, summit rounded produced in a hooked spine behind with a nodule just beneath; or briefly bilobed; apical area of tegmina multice-

- ular, apical margin obliquely truncate, apical angle acute; size medium†**Hypsolyrium** Schmidt
- 9(2). Dorsum of posterior process nearly straight without a subapical node.
- 10(11). Front process long, recurved, erect or inclined forward, moderately slender, compressed, sometimes nodulate or bulb at middle, the summit nodular, bulbous or bifurcate.
 - †**Pyrgonota** Stal, *Hybanda* Dist. *Funkhouserella* Schmidt
- 11(10). Front process distinctly porrect, short, compressed, summit obtuse; base of pronotum projecting forward; first apical cell of wings minute, ovate, sinuate before the second apical cell (unusual); head with two tubercles near base, apex spatulate; ocelli nearer to eyes†**Hybandoides** Distant, *Platyceras* Schmidt
- 12(1). Posterior process slender, erect for a space then angulate (as in *Anchon*) and straight, shorter than tegmina; front process nearly erect slightly inclined forward, gradually narrowed to the bilobed summit; tegmina with two discoidal and five apical cells, apical angle subacute, apex of clavus obtuse; clypeus long, narrow, tip obtuse; ocelli equidistant.....***Congellana** Distant

Centrocharesini

KEY TO GENERA

- 1(4). Dorsum of posterior process with a basal and subapical node; suprahumeral erect or lightly recurved; pronotum more or less spinulose or nodulate.
- 2(3). Apex of clavus acute; posterior process slightly elevated at base fully exposing scutellum, then impinging upon and extended to tips of tegmina which have two discoidal cells.....†**Centrochares** Stal
- 3(2). Apex of clavus obtuse; posterior process impinging upon scutellum whose narrow sides are visible, apical area elevated and extended midway between apex of clavus and tips of but no touching tegmina, the latter with three discoidal cells.....***Negus** Jacobi
- 4(1). Posterior process tricarinate, far passing apex of clavus, dorsum straight, destitute of nodes; suprahumeral lightly inclined forwardly; pronotum rugosely carinate and nodulose, not spinulose, sides of chest with two teeth each side; tegmina with two discoidal and five apical cells, tips acute without a limb. Type, *Daunus gracilis* Goding, (♀), in Mon, Aust. Memb. p. 33. (1903), from Beverly, West Australia.....†**Sinenodus** gen. nov.

MEMBRACINÆ

KEY TO TRIBES

- 1(4). Wings with four apical cells; tegmina with at least three discoidal and five apical cells sides of chest with one or two teeth, apex of clavus obtuse.

- 2(3). Pronotum elevated in a nearly erect robust process its summit with a strong bulbous protuberance each side and posteriorly; dorsum of posterior process elevated in a foliaceous or tectiform plate; the surface is reticulate with raised lines.....*Bolbauchenini*
- 3(2). Pronotum cornute or with a short carina or small tubercle above each humeral; dorsum of posterior process nearly straight or nodose, apex not compresso-ampliate beneath, usually not elevated.
Xiphistesini
- 4(1). Wings with three apical cells; tegmina with three discoidal and five apical cells, apex of clavus obtuse; pronotum cornute or unarmed above each humeral, suprahumeral erect or porrect; posterior process tricarinate, dorsum usually concave, apical area compresso-ampliate beneath and elevated; sides of chest with one or two teeth*Oxyrhachisini*

Bolbauchenini

KEY TO GENERA

One genus is at present known; the characters are as given in the description of the Tribe.

†*Bolbauchenia* Schumacher, *Clonauchenia* Funkhouser

Xiphistesini

KEY TO GENERA

- 1(2). Dorsum of posterior process binodose.
**Gongroneura* Jacobi, *Pedalion* Buckton
- 2(1). Dorsum of posterior process nearly straight, rarely a small gibba at base.
- 3(4). Apical area of tegmina multicellular; suprahumeral robust, porrect, tips truncate; posterior process about long as tegmina dorsum convex†*Goddefroyinella* Distant
- 4(3). Venation of tegmina normal.
- 5(6). Pronotum unarmed, sometimes with a short carina above each humeral**Xiphidia* Goding
- 6(5). Pronotum cornute above each humeral.

*†*Xiphistes* Stal, *Neoxiphistes* Distant

Oxyrhachisini

KEY TO GENERA

- 1(2). Pronotum unarmed, a short carina or tubercle above each humeral.
†*Oxyrhachidia* Melichar
- 2(1). Pronotum cornute above each humeral.
*†*Oxyrhachis* Germar, *Polocentrus* Buckton, *Ouranorthus* Buckton

DARNINÆ

KEY TO TRIBES

- 1(2). Pronotum unarmed above humeral*Darnini*
- 2(1). Pronotum cornute above each humeral*Hemikypthini*

Darnini

KEY TO GENERA

- 1(4). Wings with three apical cells; pronotum gradually passing into posterior process, dorsal line nearly straight.
- 2(3). Clavus with apex obliquely obtuse; tegmina with two discoidal and five apical cells †*Cryptaspidia* Stal
- 3(2). Clavus acuminate apex acute; apical area of tegmina multicellular. †*Anzac* Distant
- 4(1). Wings with four apical cells; tegmina with three discoidal and five apical cells, apex of clavus acute; disk of pronotum elevated in a triangular pyramidal crest †*Mesocentrus* Funkhouser

Hemikypthini

KEY TO GENERA

- 1(2). Suprahumerals long, strongly oblique, broad between bases, margins parallel and carinate, tips squarely truncate; posterior process broad at base, gradually acuminate, long as abdomen. †*Megaloschema* Buckton
- 2(1). Suprahumerals short, slender, oblique, recurved, tips acute; posterior process long, slender, tricarinate, straight, about long as abdomen; tegmina subhyaline, with two discoidal and five apical cells; legs simple. Type, *Centrotypus parvus* Funkhouser, Rec. Indian Mus. xxiv, p. 325, pl. 10, fig. 2, (1922), from Perak, Malay Peninsula, East Indies †*Cryptoparma* gen. nov.